



Division of Environmental Health and Communicable Disease Prevention

West Nile Virus FACT SHEET

What is West Nile virus?

The West Nile virus is transmitted by mosquitoes to birds, various animals, and humans. Most persons infected with this virus show no symptoms, although occasional infections can result in serious illness and even death.

Where did West Nile virus come from?

West Nile virus has been commonly found in humans, birds, and other animals in Africa, Eastern Europe, Western Asia, and the Middle East, but until 1999 had not previously been documented in the Western Hemisphere. The U.S. viral strain is most closely related genetically to strains found in the Middle East.

What are the symptoms of West Nile virus infection?

Most people infected with this virus do not have any symptoms. Some people experience a mild illness characterized by slight fever, headache, body aches, skin rash, and swollen lymph nodes. More severe illness can include encephalitis (inflammation of the brain) or meningitis (inflammation of the tissues that cover the brain and spinal cord). Severe manifestation of West Nile virus is marked by a rapid onset of a high fever, head and body aches, neck stiffness, muscle weakness, disorientation, coma, tremors, convulsions, and in the most severe cases, death.

How soon after exposure do symptoms appear?

Symptoms usually appear 3 to 15 days after exposure.

What if I am pregnant?

There is one documented case of transplacental (mother-to-child) transmission of WNV in humans. Although the newborn in this case was infected with WNV at birth and had severe medical problems, it is unknown whether the WNV infection itself caused these problems or whether they were coincidental. More research will be needed to improve our understanding of the relationship - if any - between WNV infection and adverse birth outcomes. The U.S. Centers for Disease Control and Prevention recommends that pregnant women use an insect repellent that contains DEET to prevent infection with mosquito-borne diseases.

How do people get West Nile virus?

The West Nile virus, like most mosquito-borne viruses, is found in wild and domestic birds. When a mosquito feeds on an infected bird, it can pick up the virus and transmit it to other, noninfected birds. Occasionally, infective mosquitoes will feed on mammals such as horses, dogs, cats, and humans, and transmit the virus to them.

If I live in an area where birds or mosquitoes with West Nile virus have been reported and a mosquito bites me, am I likely to get sick?

No, even in areas where mosquitoes do carry the virus, very few mosquitoes—much less than 1%—are infected. If the mosquito is infected, less than 1% of people who get bitten and become infected will get severely ill. The chances you will become severely ill from any one-mosquito bite are extremely small.

Can I get West Nile virus directly from birds?

Although transmission of WNV and similar viruses to laboratory workers is not a new phenomenon, two recent cases of WNV infection of laboratory workers have been reported. There is no evidence that a person can get the virus from simply handling live or dead infected birds. However, persons should avoid barehanded contact when handling any dead animals and use gloves or double plastic bags to place the carcass in a garbage can.

How can I report a sighting of dead bird(s) in my area?

Contact your local or state health department if you observe dead birds, particularly crows and blue jays. Health officials will determine whether the event should be investigated and whether bird specimens should be submitted to a laboratory for testing.

Can West Nile virus be spread from person-to-person?

A recent investigation has confirmed WNV transmission through transplanted organs and/or blood products. However, beyond this particular unique transmission pathway, West Nile virus infection is not transmitted from person to person. For example, you cannot get West Nile virus from touching or kissing a person who has the disease, or from a health care worker who has treated someone with the disease.

How can I protect myself from West Nile virus?

It is not necessary to limit any outdoor activities. However, you can and should try to reduce your risk of being bitten by mosquitoes. Mosquitoes are most active at dawn and dusk. Reducing the mosquito population around your home and property can be accomplished by eliminating standing water:

- Dispose of tin cans, plastic containers, ceramic pots or similar water-holding containers.
- Remove all discarded tires on your property. Used tires are very significant mosquito breeding sites.
- Drill holes in the bottoms of recycling containers that are kept outdoors.

- Make sure roof gutters drain properly, and clean clogged gutters in the spring and fall.
- Turn over plastic wading pools and wheelbarrows when not in use.
- Change the water in birdbaths at least weekly.
- Clean vegetation and debris from edges of ponds.
- Clean and chlorinate swimming pools, outdoor saunas, and hot tubs.
- Drain water from pool covers.
- Use landscaping to eliminate standing water that collects on your property.

In addition to reducing standing water in your yard, make sure all windows and doors have screens, and that all screens are in good repair. If West Nile virus is found in your area:

- Wear long-sleeved shirts and long pants whenever you are outdoors.
- Spray clothing with repellents containing permethrin or DEET since mosquitoes may bite through thin clothing. Apply insect repellent sparingly to exposed skin. An effective repellent will contain 35% DEET (N, N-diethyl-meta-toluamide). DEET in high concentrations (greater than 50%) provides no additional protection. Repellents may irritate the eyes and mouth, so avoid applying repellent to the hands of children. Whenever you use an insecticide or insect repellent, be sure to read and follow the manufacturer's DIRECTIONS FOR USE, as printed on the product.

What should hunters do to protect themselves against West Nile

virus? The West Nile virus has been isolated in white tail deer, rabbits, and squirrels. Hunters should follow the usual precautions when handling wild animals. They should wear gloves when handling and cleaning animals to prevent blood exposure to bare hands and meat should be cooked thoroughly. If hunters anticipate being exposed to mosquitoes, they should apply insect repellents to clothing and skin according to label instructions.

How is West Nile virus diagnosed?

If you or your family members develop symptoms such as high fever, confusion, muscle weakness, and severe headache, you should see your health care provider immediately. Your health care provider will assess your risk for West Nile virus infection. If you are determined to be at high risk, your provider will draw a blood sample and send it to a laboratory for confirmation.

What is the treatment?

There is no specific treatment for viral infections, other than to treat the symptoms and provide supportive care. In more severe cases, intensive supportive therapy is indicated, often involving hospitalization, intravenous fluids and nutrition, respiratory support, prevention of secondary infections, and good nursing care. Elderly persons are at highest risk for developing severe illness due to West Nile viral infection, so these individuals should promptly seek medical care if infection is suspected.

Is there a West Nile virus vaccine for humans?

No, but several companies are working towards developing a vaccine.

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